1.4 Review of Management Measures to Protect EFH in the Alaska EEZ

Incorporation of habitat concerns into fishery management of North Pacific Fisheries is not a new concept. Numerous actions have been taken based on an explicit habitat policy.

1.4.1 History of NPFMC Habitat Management Policy

Efforts to integrate habitat considerations into the fishery management process go back to the inception of the Magnuson Fishery Conservation and Management Act (MFCMA) in 1976. The Act directs the Councils to recommend management plans for commercial and recreational species of fish occurring in the EEZ throughout the range of the species. Some believed this directive gave the Councils authority to consider fishery related habitat issues within the territorial sea and further inland, even though the Councils clearly did not have jurisdiction within State waters. Although some efforts were made to address significant fishery habitat issues, the Councils and the National Marine Fisheries Service (NMFS) concentrated largely on ocean harvest during the first decade after passage of the Magnuson Act.

In 1983, NMFS adopted a National Habitat Conservation Policy, uniting its MFCMA authority with its advisory responsibilities and authority under the Fish and Wildlife Coordination Act (FWCA) and the National Environmental Policy Act (NEPA). The Habitat Conservation Policy provides guidance to the agency regarding its interactions with the Councils and other Federal and State agencies. It also focuses NMFS's habitat conservation efforts on specific habitat problems affecting fishery resources, marine mammals, and endangered marine species. Although NMFS's policy notifies other agencies and the Councils of NMFS intent, it does not clarify the Councils' role in fishery related habitat issues.

In 1986, Congress amended the Act, essentially codifying elements of the NMFS Habitat Conservation Policy and giving the Regional Fishery Management Councils new authority and responsibility to include "readily available" habitat information in all fishery management plans. The Amendments direct the Councils, with guidance from NMFS, to evaluate the effect that changes in habitat may have on managed fisheries. Furthermore, the 1986 amendments gave the Councils the opportunity to recommend habitat management measures for ongoing and proposed Federal or State activities which could adversely affect fishery resources. Federal agencies are required to respond specifically and substantively to a Council's recommendations within 45 days. The Amendments also encourage the Councils to monitor state activities and to comment on those that could adversely affect Council managed fishery resources.

NPFMC's Habitat Policy Statement of 1988.

The Council shall assume an aggressive role in the protection and enhancement of habitats important to marine and anadromous fishery resources. It shall actively enter Federal decision-making processes where proposed actions may otherwise compromise the productivity of fishery resources of concern to the Council. Recognizing that all species are dependent on the quantity and quality of their essential habitats, it is the policy of the North Pacific Fishery Management Council to:

> Conserve, restore, and maintain habitats upon which commercial, recreational and subsistence marine fisheries depend, to increase their extent and to improve their productive capacity for the benefit of present and future generations. (For purposes of this policy, habitat is defined to include all those things physical, chemical, and biological that are necessary to the productivity of the species being managed.)

This policy shall be supported by three policy objectives which are to:

(1) Maintain the current quantity and productive capacity of habitats supporting important commercial, recreational and subsistence fisheries, including their food base. (This objective will be implemented using a guiding principle of NO NET HABITAT LOSS caused by human activities.)
(2) Restore and rehabilitate the productive capacity of habitats which have already been degraded by human activities.
(3) Maintain productive natural habitats where increased fishery productivity will benefit society.

In September 1988, the North Pacific Fishery Management Council adopted the adjacent policy statement to guide its review of habitat issues. The policy statement itself is augmented by descriptions of the responsibilities, guideline, review process, and definition that will assist the council in executing the habitat policy.

In light of this policy, the North Pacific Fishery Management Council and the National Marine Fisheries Service have enacted certain measures that are consistent with protecting habitat and ecosystem components from potential negative impacts of fisheries. A number of these measures are described below.

1.4.2 Tightly Controlled Harvest Quotas

Total removals of groundfish are controlled by conservative catch quotas. Each year, the NPFMC makes recommendations to the Secretary of Commerce on annual harvest levels for target, prohibited and other species categories. Harvest levels are based on annual stock assessments, which are reviewed by the NPFMC's groundfish plan teams and Scientific and Statistical Committee, and other relevant information on the fisheries. For target species, three harvest levels are set, corresponding to the overfishing level (OFL), the acceptable biological catch (ABC) and total allowable catch (TAC). TACs are essentially annual quotas for the fishery. ABCs generally define acceptable harvest levels from a stock perspective (based on a conservative $F_{40\%}$ strategy for most stocks), and OFL defines the unacceptable harvest level (generally $F_{30\%}$). These quota specifications account for all groundfish harvested, including those fish landed and those discarded (100% mortality for all discards is assumed). To evenly distribute catch and effort, ABCs and TACs may be set for specific regulatory areas, particularly in the GOA. The total TACs of all species, within all regulatory areas, must fall within the optimum yield (OY) range of 116,000 to 800,000 mt for the GOA and 1.4 to 2.0 million mt for the BSAI. Fisheries are closely monitored through reporting requirements and a comprehensive observer program. NMFS is responsible for in-season management of the fisheries, and NMFS closes directed fisheries for each species or complex prior to when the TAC is taken. As such, management has been effective at maintaining catches of groundfish within biologically acceptable levels.

Catch quotas for North Pacific groundfish have been very conservative. For example, in 1981, the Council established a 2 million metric ton cap for Bering Sea and Aleutian Islands groundfish. This limits the total removal of groundfish from the area to 2 million mt per year (allowable sum of all TACs), which has been considerably less than the sum of all ABCs (which has averaged about bout 2.8 million

mt). As a result, most groundfish stocks, particularly flatfish stocks, are being underfished now because of the cap. A summary of the 1997 BSAI groundfish catch specifications is shown in the following table. Note that the sum of all ABCs was 2.46 million mt.

In addition to setting maximum harvest levels, fisheries have been both seasonally and spatially allocated to reduce potential impacts of localized depletion. For example, the Bering Sea pollock TAC is split among a winter fishery (A-season) and a late summer fishery (B-season). In the GOA, pollock is spatially apportioned into regional areas. Regional apportionment is also done for Atka mackerel in the Aleutian Islands. Because Atka mackerel and pollock are important prey for higher trophic levels, these measures reduce the impacts of harvesting on the ecosystem.

Exploitable biomass and harvest specifications (mt) of Bering Sea and Aleutian Islands groundfish, 1997. Biomass listed is that projected for 1997.

Species	Area	Biomass	OFL	ABC	TAC
Pollock	BS	6,120,000	1,980,000	1,130,000	1,130,000
	AI	100,000	38,000	28,000	28,000
	Bogoslof	558,000	43,800	32,100	1,000
Pacific Cod	BSAI	1,590,000	418,000	306,000	270,000
Yellowfin sole	BSAI	2,530,000	339,000	233,000	230,000
Greenland turbot	BSAI	118,000	22,600	12,350	9,000
Arrowtooth flounder	BSAI	587,000	167,000	108,000	20,760
Rock sole	BSAI	2,390,000	427,000	296,000	97,185
Flathead sole	BSAI	632,000	145,000	101,000	43,500
Other flatfish	BSAI	616,000	150,000	97,500	50,750
Sablefish	BS	17,900	2,750	1,308	1,100
	AI	18,600	2,860	1,367	1,200
Pacific Ocean Perch	BS	72,500	5,400	2,800	2,800
	AI	324,000	25,300	12,800	12,800
Sharpchin/Northern	AI	96,800	5,810	4,360	4,360
Shortraker/Rougheye	AI	45,600	1,250	938	938
Other red rockfish	BS	29,700	1,400	1,050	1,050
Other rockfish	BS	7,100	497	373	373
	AI	13,600	952	714	714
Atka mackerel	AI	450,000	81,600	66,700	66,700
Squid	BSAI	n/a	2,620	1,970	1,970
Other species	BSAI	688,000	138,000	25,800	25,800
TOTAL (all species)	BSAI	17,004,800	3,998,839	2,464,130	2,000,000

The Council also has a record of rebuilding depleted stocks. Conservation policies adopted by the Council in the 1980s had the effect of restoring depleted stocks such as yellowfin sole and sablefish. In 1993, the Council established an explicit rebuilding plan for GOA Pacific ocean perch. This stock had been depleted by foreign fisheries in the mid-1960s. The plan established a target spawning biomass and a rebuilding schedule based on a very conservative harvest strategy. A follow-up amendment (Amendment 38) allows the removal rates to be set even more conservatively to hasten rebuilding of this stock. Because Pacific ocean perch are a long-lived component of the GOA fish community, the rebuilding plan falls within the realm of an ecosystem-based management strategy.

In 1996, the Council adopted a more conservative overfishing definition under Amendment 44/44 to the BSAI and GOA groundfish fishery management plans. Overfishing is a level or rate of fishing mortality that jeopardizes the long-term capacity of a stock to produce maximum sustainable yield on a continuing basis. The new definition instituted new safeguards against overly aggressive harvest rates, particularly under conditions of high uncertainty or low stock size. The new definition sets a maximum allowable fishing rate as prescribed through a set of six tiers corresponding to information availability. In addition, a buffer will be maintained between acceptable biological catch (ABC) and the overfishing level. Under current stock conditions, ABCs were reduced for flatfish, sablefish, and many rockfish species in both the GOA and BSAI areas.

In 1997, the Council adopted, and the Secretary has since approved, amendments to the GOA and BSAI groundfish FMPs that prohibit directed fishing for forage fish (smelts, in particular). The FMPs now define smelts to include capelin (*Mallotus villosus*), rainbow smelt (*Osmerus mordax*), and eulachon (*Thaleichthys pacificus*), which are important prey for groundfish, seabirds, and marine mammals. Prior to the amendment, smelts were included in the "other species" directed category and assigned a TAC for the category as a whole. The Council took this proactive approach by preventing fisheries for these important species from expanding or developing.